



M1578112A

ITEM NUMBERS: 1578112, 1578172
1578132, 1578182
1578152, 1578202
1577543, 1577544

Owner's Manual

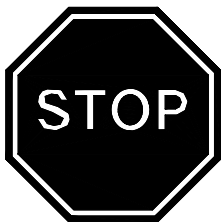
Pressure Washer: Machine that cleans dirty surfaces with high pressure water.



⚠ WARNING

Read this manual.

Serious injury or death can result if safety instructions are not followed.



Engine is shipped without oil.

- Before starting engine, fill engine oil.
- See engine manual for engine oil requirements.

Pump is shipped with oil.

- Remove shipping plug and install vented fill cap. (Comet Pumps)
- Remove shipping tape from pump oil fill cap. (Cat Pumps)
- See pump oil cap section of this manual.

Closely inspect all components.

- If you have damaged components then: Contact the freight company that delivered the unit and file a claim.
- If you have missing components then: Contact Customer Service at 1-800-270-0810.

fig01862

Any Questions, Comments, Problems or Parts Orders

Call NorthStar Product Support 1-800-270-0810

Hazard Signal Word Definitions






	<p>This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.</p>
	<p>DANGER (red) indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.</p>
	<p>WARNING (orange) indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.</p>
	<p>CAUTION (yellow) indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.</p>
	<p>CAUTION (yellow) used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, may result in property damage.</p>

fig01453

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⚠ Important Safety Rules






⚠ WARNING	
	<p>1.) Read owner's manual completely. Serious injury or death can result if safety instructions are not followed. You must be 16 or older to operate this machine. Keep untrained people away.</p>
	<p>2.) Skin puncture hazard. High pressure fluid can inject under skin resulting in serious injury including amputation. Do not direct spray at people or animals. -If skin injection happens, seek IMMEDIATE surgical treatment. -Do not check for leaks with hand. Instead, use a piece of cardboard to check for leaks. -Do not use unit if exterior hose damage is evident. Make sure all fittings are tight before starting. Relieve system pressure before servicing. -Know how to stop engine and bleed pressures quickly. Be thoroughly familiar with the controls. -Make sure accessories meet the unit's temperature and pressure limits. -Stop engine, bleed pressure, and engage spray gun safety lock before leaving unit unattended.</p>
 	<p>3.) Risk of fire and explosion. Hot exhaust fumes from engine can cause fire. Gasoline is highly flammable and explosive. You can be burned or seriously injured when handling fuel. -Position muffler at least 7 feet from combustible objects. -Before adding fuel, stop the engine and keep heat, sparks, and flame away. Do not add fuel when engine is running or still hot. No smoking near engine. -Do not pump fuel directly into engine at gas station. Static charge can build and ignite fuel. Use a UL approved fuel container to transfer gas to the engine. Wipe up fuel spills immediately. -Only store and handle fuel outdoors. Gasoline vapors can ignite if they collect inside an enclosure. Explosion can result. -Do not change or add to exhaust system. Fire can result. -Do not change or add fuel tanks or fuel lines. Fire can result. -Before each use, check fuel tank and fuel lines for leaks. Any fuel leak is a fire hazard. Fix any fuel leaks before starting engine. -During transportation take precautions to make sure pressure washer will not tip over and cause a fuel leak fire hazard.</p>
	<p>4.) Poisonous gas. This machine gives off carbon monoxide, a poisonous gas that can kill you. You CANNOT smell it, see it, or taste it. -ONLY run machine outdoors and away from air intakes. -NEVER run machine inside homes, garages, sheds, or other semi-enclosed spaces. These spaces can trap poisonous gases, EVEN IF you run a fan or open doors and windows. If you start to feel sick, dizzy, or weak while using this machine, shut it off and get to fresh air RIGHT AWAY. See a doctor. You may have carbon monoxide poisoning.</p>

fig01572

Save These Instructions

⚠ Important Safety Rules

⚠ WARNING



5.) Risk of exposure to dangerous chemicals.

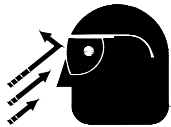
Serious injury or death can result if chemical manufacturer instructions are not followed.

- Wear protective gloves when handling and cleaning with chemicals.
- Understand all safety hazards and first aid for all chemicals being used.
- When cleaning filters, check if chemicals have been used and take any precautions that are recommended by the chemical manufacturer.
- Different chemicals may interact dangerously with each other, always follow chemical manufacturer directions before switching chemicals.
- Calculate the correct amount of chemical to mix, dispose of excess chemical per the manufacturer instructions.
- Never spray flammable liquids.



6.) Risk of electrocution.

Electricity can kill you. Keep water away from electrical outlets and electrical devices.



7.) Flying objects.

Small particles may fly out while spraying. Wear safety glasses. Serious eye injury can occur.

Make sure nozzle is secure before squeezing trigger. If nozzle is not secure it will become a projectile.



8.) Fall hazard.

Pressure washer creates puddles and slippery surfaces. Keep good footing and balance. Serious injury can occur.

- Wear footwear capable of maintaining a good grip on wet surfaces.
- Gun kicks back. Hold with both hands.
- Do not overreach or stand on unstable supports.
- Do not stand on ladders or scaffolding.
- Do not place pressure washer on soft or unstable ground.



⚠ CAUTION

1.) Hot muffler.

You can be burned by muffler. Do not touch.

fig01846

▲ Warning Label Locations

START-UP INSTRUCTIONS

1. Attach garden hose.
2. Attach pressure hose.
3. Attach gun and lance.
4. Turn water supply ON.
5. Squeeze trigger to purge air from pump.
6. Insert nozzle.
7. Start engine.

SHUT-DOWN INSTRUCTIONS

1. Turn engine OFF.
2. Turn water supply OFF.
3. Squeeze trigger to relieve system pressure.
4. Remove garden hose.
5. Remove pressure hose.
6. Turn fuel valve OFF (if equipped).



▲ WARNING



1.) Skin puncture hazard. Do not direct spray at people or animals. Seek IMMEDIATE surgical treatment.



2.) Risk of fire and explosion. Do not add fuel when engine is running or still hot.



3.) Breathing hazard. Poisonous fumes from engine can kill you. Do not operate indoors even if ventilated.



4.) Risk of electrocution. Keep water away from electric outlets and electric devices.



5.) Read owner's manual. Serious injury or death can result if safety instructions are not followed.

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FIG02833

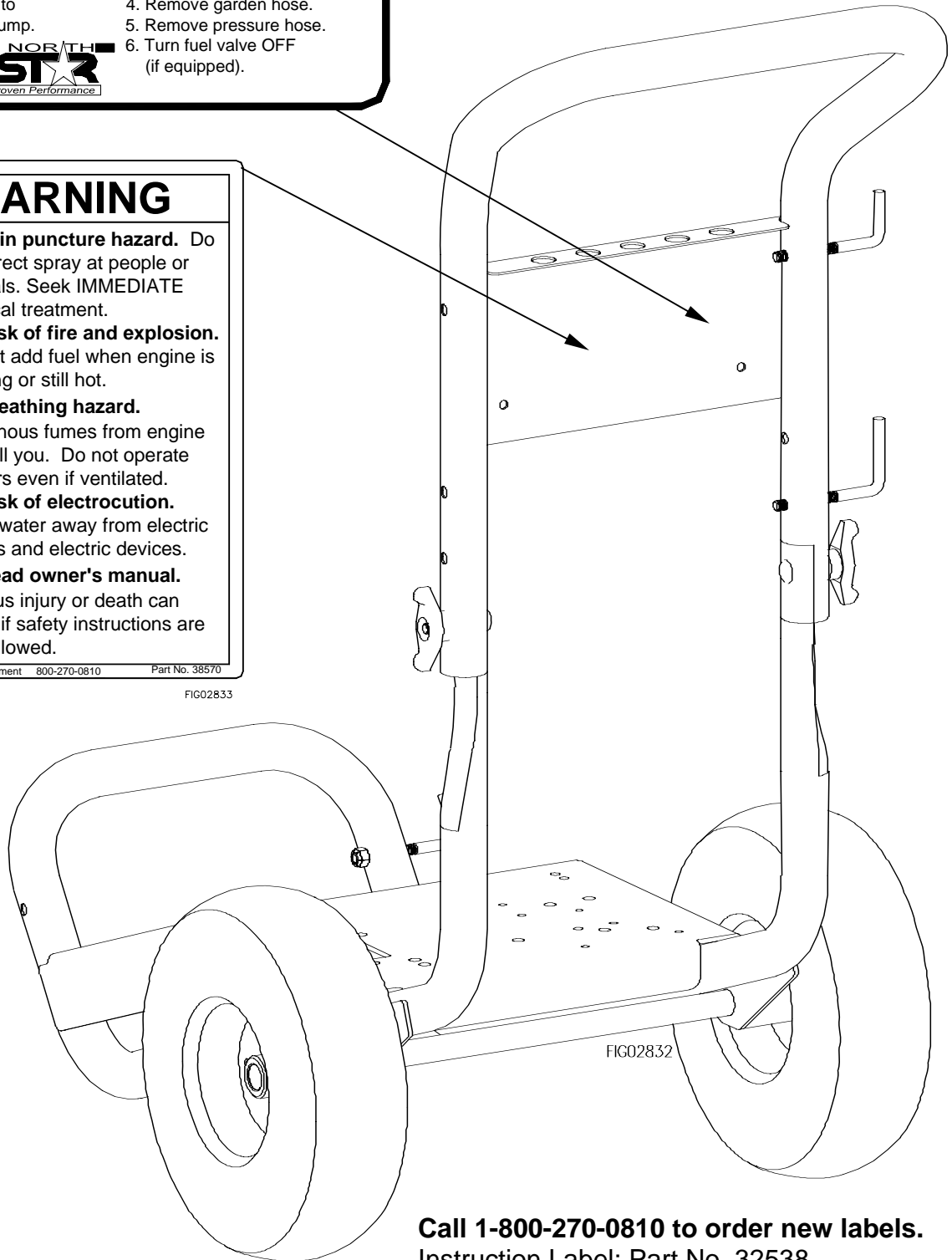


FIG02832

Call 1-800-270-0810 to order new labels.
Instruction Label: Part No. 32538
Warning Label: Part No. 38570 (includes hot muffler caution located on engine)

▲ Assembly Instructions

I.) Unpack

Your pressure washer is shipped in two boxes. Separate and identify the components found in both boxes.

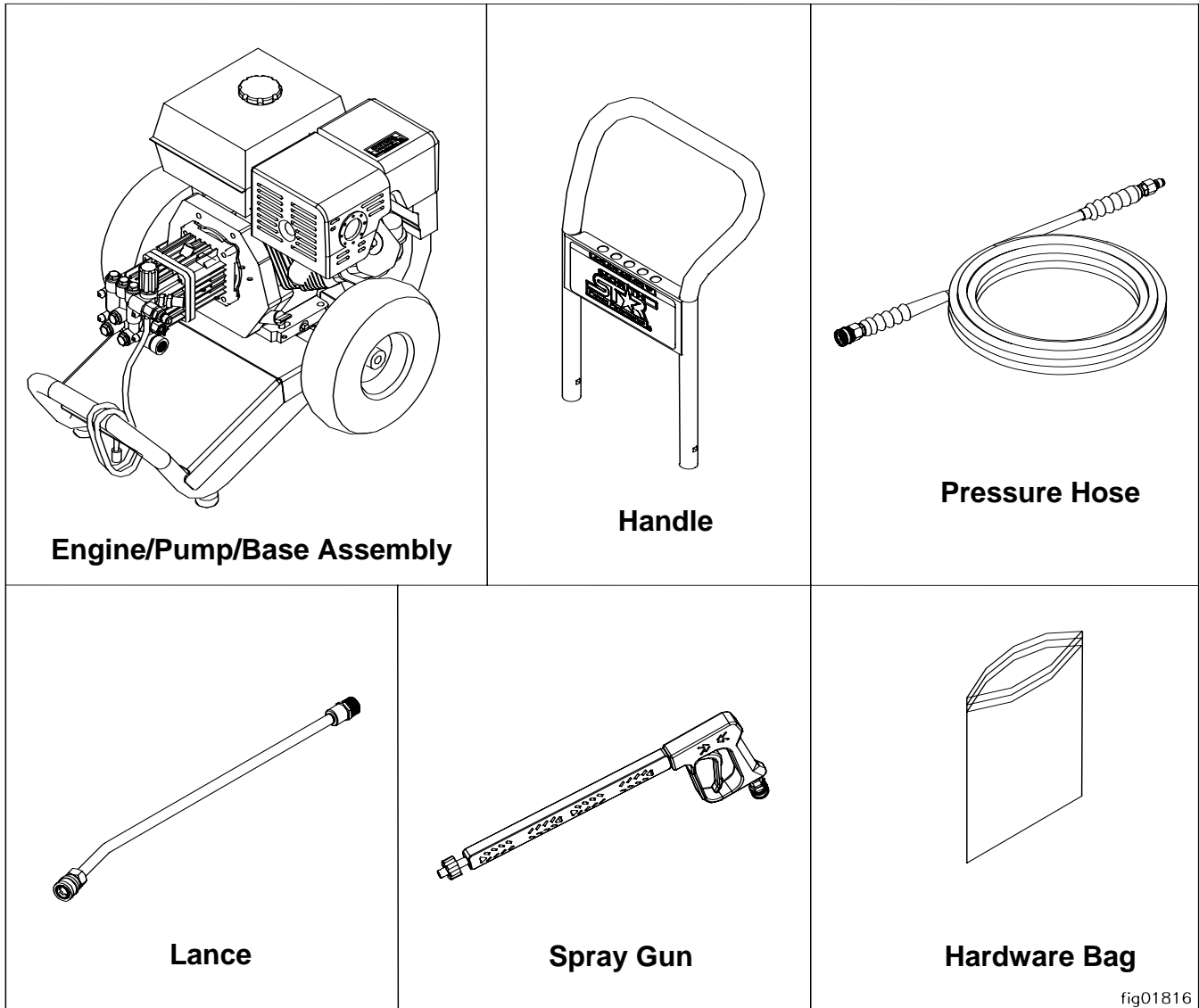


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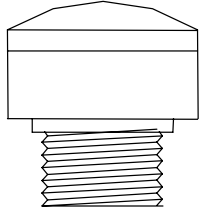
* Depending in model, components may appear differently than illustrated

Any Questions, Comments, Problems or Parts Orders

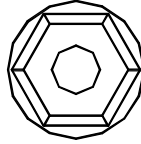
Call NorthStar Product Support 1-800-270-0810

▲ Assembly Instructions

II.) Hardware Bag



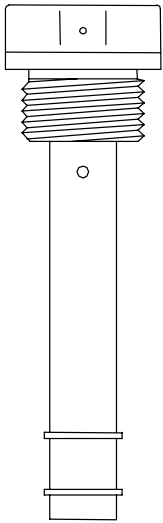
Vented fill cap
1578112, 1578132,
1577543, 1577544



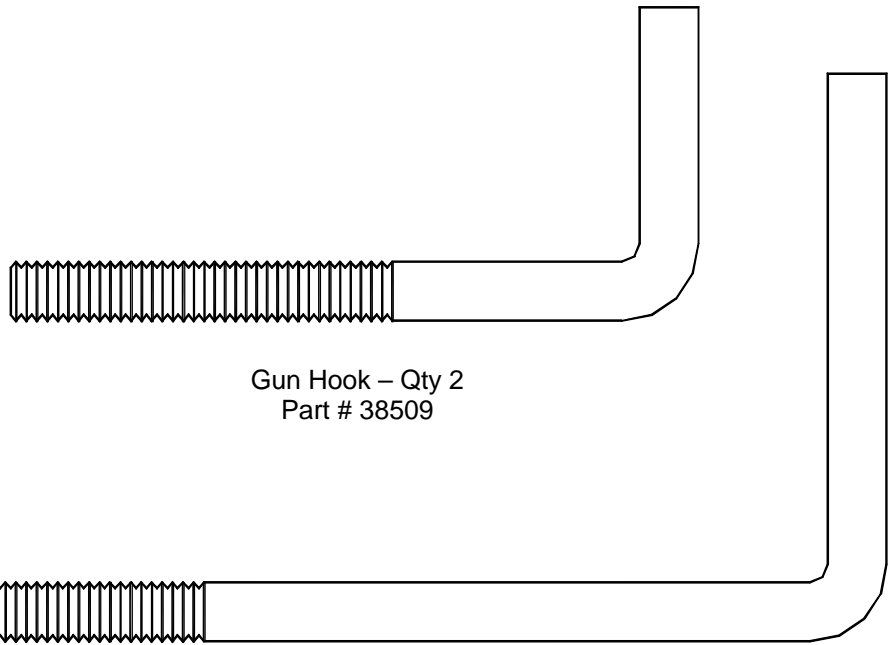
Flange Nut – Qty 6
Part # 82019



Carriage Bolt – Qty 2
Part # 82233



Vented dipstick
1578152 only

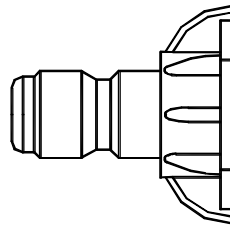


Gun Hook – Qty 2
Part # 38509

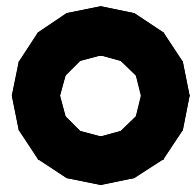
Hose Hook – Qty 1
Part # 38510



T- Handle Knob – Qty 2
Part # 38578



Nozzle – Qty 2 or 5
Varies by model

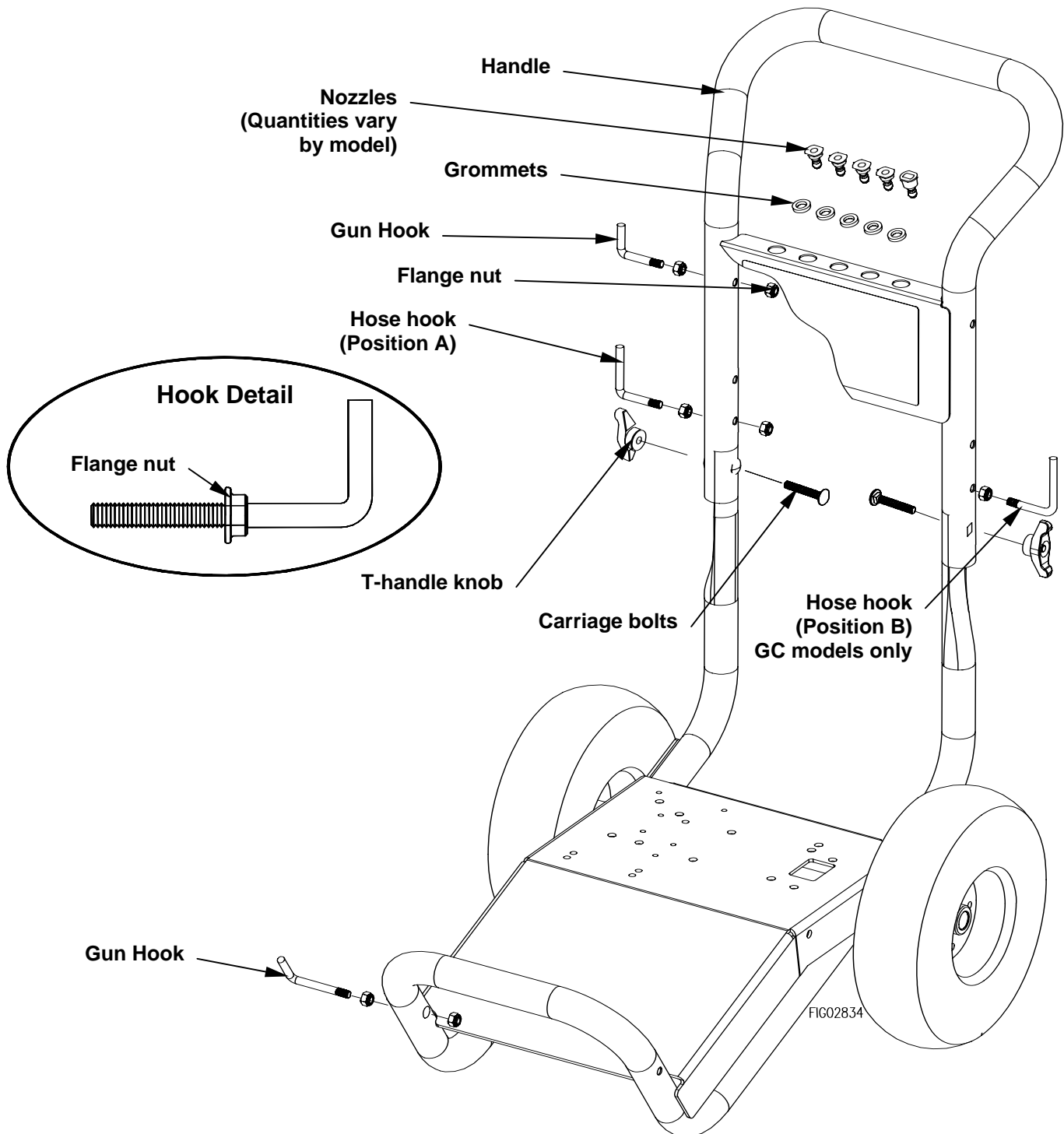


Grommet – Qty 5
Part # 35198

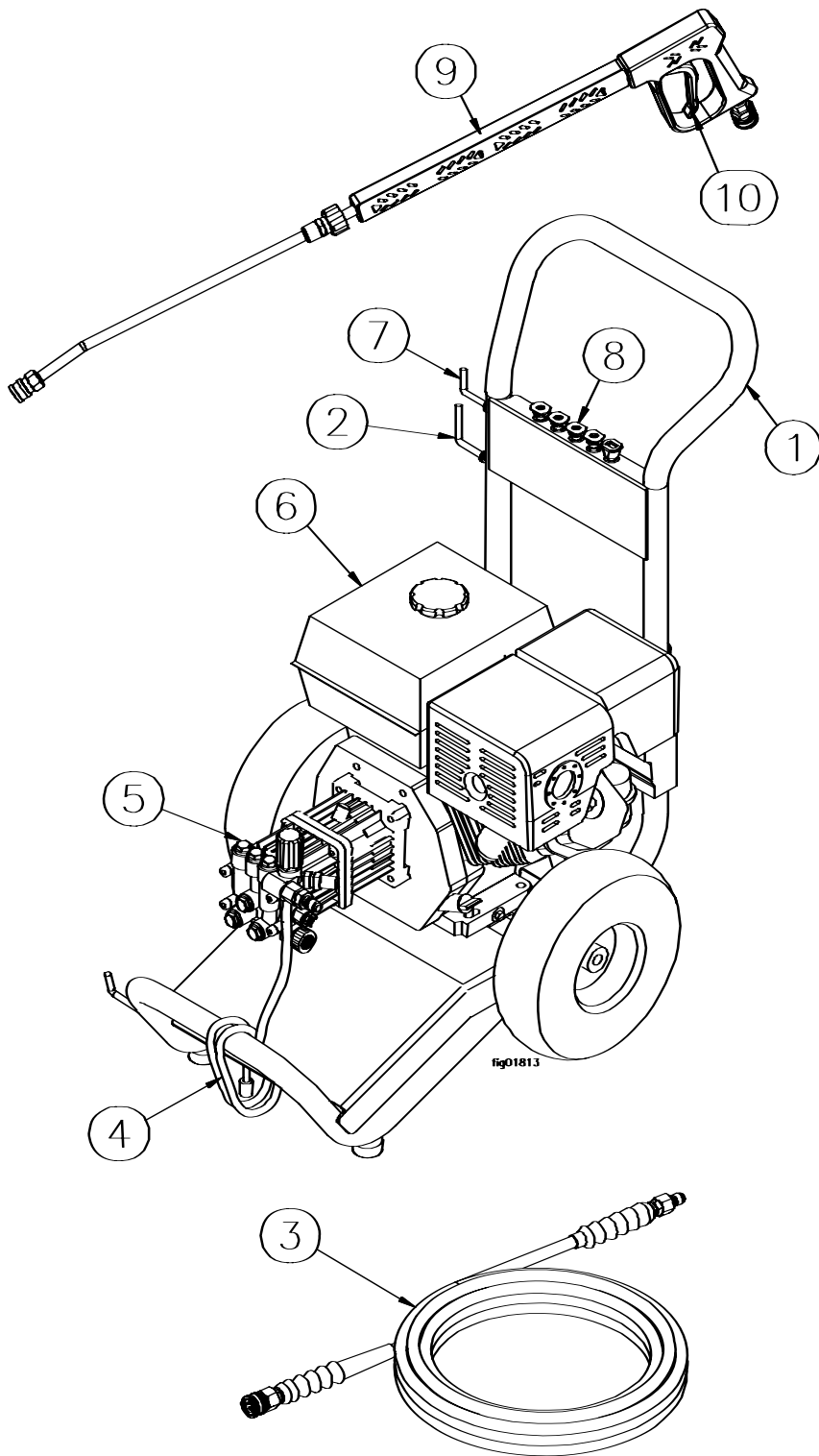
▲ Assembly Instructions

III.) Handle Assembly

- 1.) Attach handle to base with two carriage bolts and t-handle knobs.
- 2.) Spin a flange nut backwards onto the hose hook and each gun hook. (see hook detail)
- 3.) Mount the hose hook and gun hooks onto the handle as shown.
- 4.) Insert grommets into the holes on the handle nameplate.
- 5.) Press nozzles into grommets according to the colors indicated on the handle decal.



Machine Component Identification



- 1.) **Handle.** Designed for easy cart movement.
- 2.) **Hose Hook.** Store hose on hook. (Position depends on model, see Assembly Instructions section.)
- 3.) **Pressure Hose.** Attach quick couplers to gun and water outlet.
- 4.) **Chemical Hose.** Submerge in cleaning solution.
- 5.) **Water Pump.** Inspect for loose/broken parts prior to each use.
- 6.) **Engine.** Honda engine provides years of reliable use.
- 7.) **Gun Hook.** Store gun on hook.
- 8.) **Nozzles.** Change nozzles for different spray patterns
- 9.) **Spray Gun.** Always use two hands for safe operation.
- 10.) **Trigger.** Actuate to allow pressurized water to flow out of spray gun.

*Note: Item 1578132 shown, location of components on other models vary slightly

Pump Oil Cap and Pump Component Identification

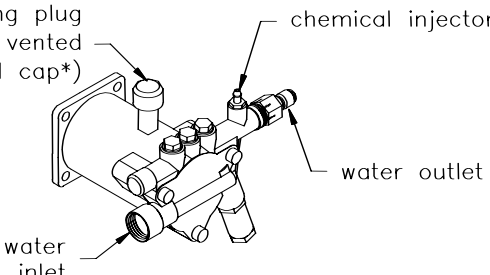
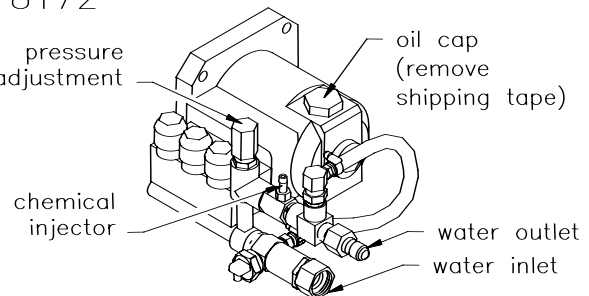
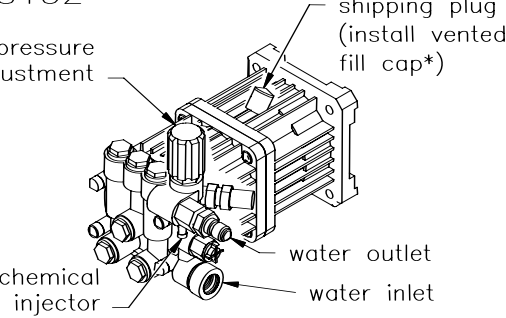
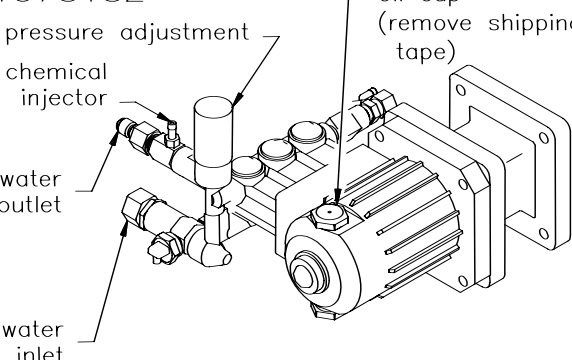
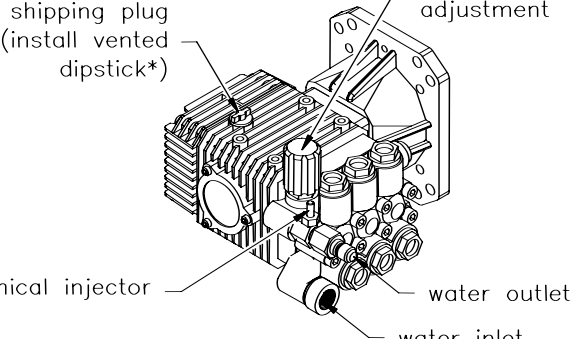
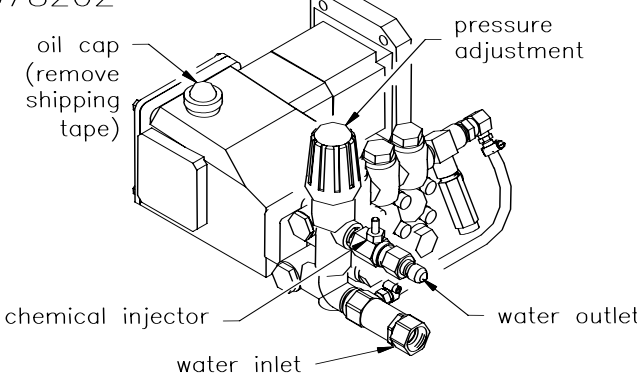
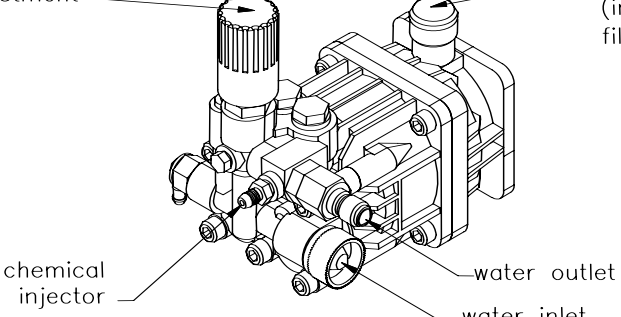
<p>1577543</p>  <p>shipping plug (install vented fill cap*)</p> <p>chemical injector</p> <p>water outlet</p> <p>water inlet</p>	<p>1578172</p>  <p>pressure adjustment</p> <p>oil cap (remove shipping tape)</p> <p>chemical injector</p> <p>water outlet</p> <p>water inlet</p>
<p>1578132</p>  <p>shipping plug (install vented fill cap*)</p> <p>pressure adjustment</p> <p>chemical injector</p> <p>water outlet</p> <p>water inlet</p>	<p>1578182</p>  <p>oil cap (remove shipping tape)</p> <p>pressure adjustment</p> <p>chemical injector</p> <p>water outlet</p> <p>water inlet</p>
<p>1578152</p>  <p>shipping plug (install vented dipstick*)</p> <p>pressure adjustment</p> <p>chemical injector</p> <p>water outlet</p> <p>water inlet</p>	<p>1578202</p>  <p>oil cap (remove shipping tape)</p> <p>pressure adjustment</p> <p>chemical injector</p> <p>water outlet</p> <p>water inlet</p>
<p>1578112 1577544</p>  <p>pressure adjustment</p> <p>shipping plug (install vented fill cap*)</p> <p>chemical injector</p> <p>water outlet</p> <p>water inlet</p>	

FIG02405

*Note: Discard shipping plug and o-ring.

▲ Operation Instructions

Water Supply

- 1.) Make sure the water supply is clean. Debris can cause excess pump wear and reduce performance.
- 2.) An insufficient water supply will damage your pump. Make sure the water supply is steady and is 20% over the rated flow of your pump. Use a stopwatch to time how long it takes to fill a 5 gallon bucket with your garden hose. The bucket must fill faster than the times listed in the table below.

Model	Time to fill 5 gallon bucket
1577543	100 seconds
1577544	100 seconds
1578112	100 seconds
1578132	84 seconds
1578152	72 seconds
1578172	100 seconds
1578182	84 seconds
1578202	72 seconds

- 3.) The water supply garden hose must have an inside diameter of at least 5/8". If the hose is more than 100 ft. long, the diameter must be at least 3/4".
- 4.) Never use a reservoir tank as a water source. Drawing water out of a tank may cause pump cavitation and damage to your pump. This pressure washer is designed for a pressurized water source such as a city water faucet. However, the water source pressure must not exceed 115 psi (8 bar).
- 5.) Always use a flexible rubber hose for your water supply. Do not use rigid piping.

⚠ Operation Instructions

Start-Up Instructions

1. Attach garden hose to water inlet.
2. Attach pressure hose to water outlet and gun.
3. Attach spray gun to lance.
4. Turn water supply ON.
5. Squeeze trigger to purge air from pump.
6. Insert nozzle.
7. Start engine.

Shut-Down Instructions

1. Turn engine OFF.
2. Turn water supply OFF.
3. Squeeze trigger to relieve system pressure.
4. Remove garden hose.
5. Remove pressure hose.
6. Turn fuel valve OFF (if equipped).

⚠ WARNING



Skin puncture hazard.

High pressure fluid can inject under skin resulting in serious injury including amputation. Do not direct spray at people or animals.

-If skin injection happens, seek IMMEDIATE surgical treatment.

-Do not check for leaks with hand. Instead, use a piece of cardboard to check for leaks.

-Do not use unit if exterior hose damage is evident. Make sure all fittings are tight before starting. Relieve system pressure before servicing.

-Know how to stop engine and bleed pressures quickly. Be thoroughly familiar with the controls.

-Make sure accessories meet the unit's temperature and pressure limits.

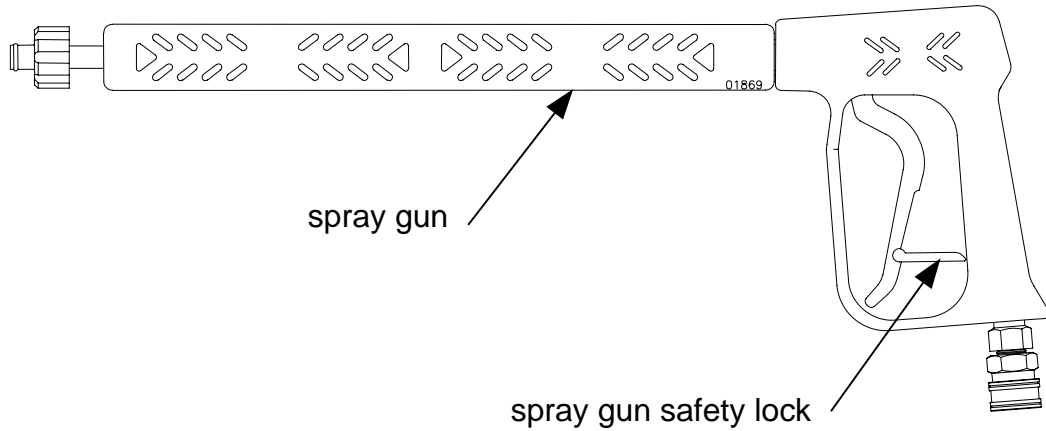
-Stop engine and bleed pressures before leaving unit unattended.

fig01863

⚠ Operation Instructions

Spray Gun Safety Lock

When not spraying, use the spray gun safety lock to prevent accidental high pressure discharge.

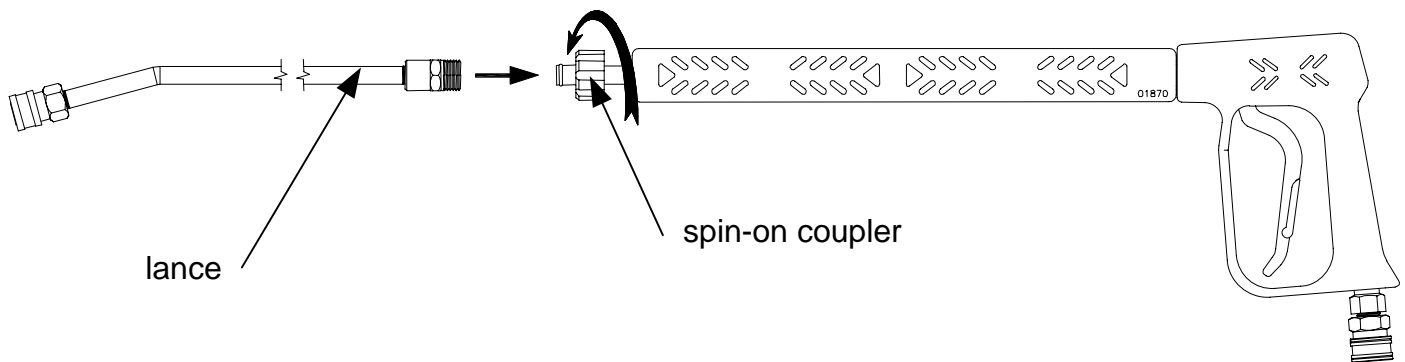


* Note: Depending on model, gun may appear differently.

Attaching the Lance

Tighten spin-on coupler hand tight.

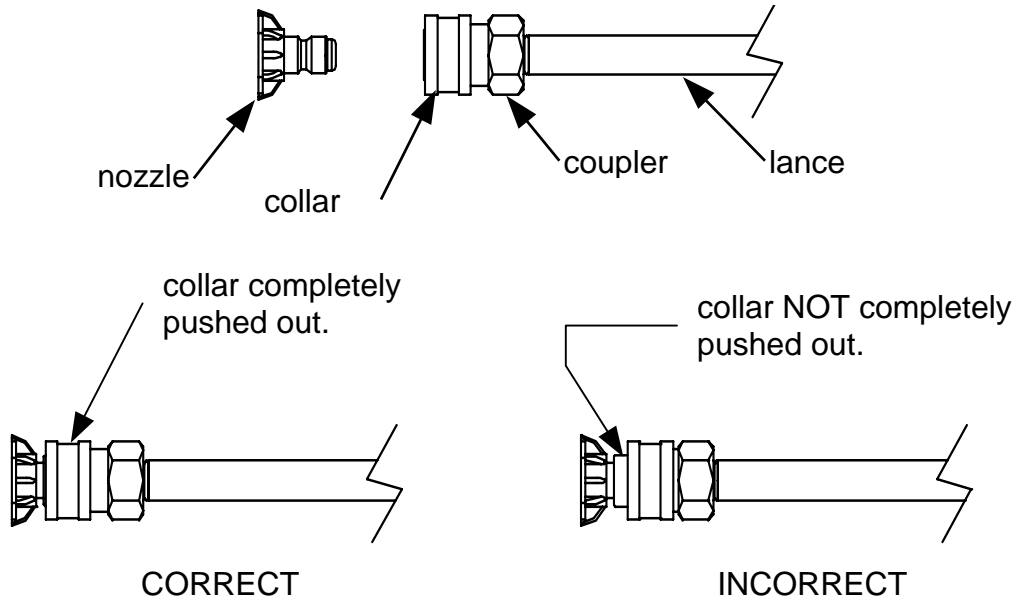
Note: The o-rings make the seal so there is no need to tighten with a wrench.



⚠ Operation Instructions

Installing Nozzles

To install a nozzle pull back the collar and push the nozzle into the coupler. Once the connection is made, pull on the nozzle to make sure it is secure.



⚠ WARNING

Flying objects.

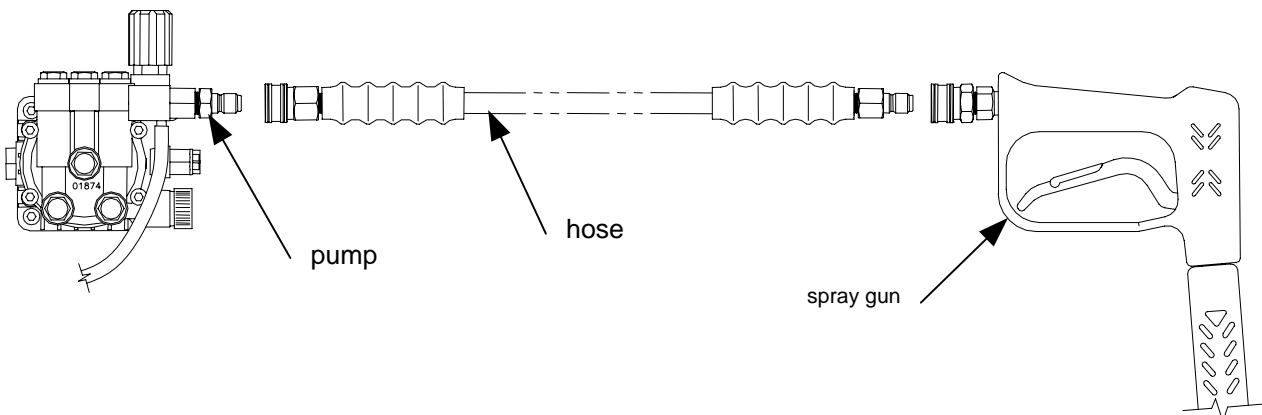
Make sure nozzle is secure before squeezing trigger. If nozzle is not secure it will become a projectile. Serious injury can occur.

fig01864

Attach Quick Connect Couplers

-To install the hose onto the pump, pull back the collar and push the hose into the coupler on the pump.

-To install the hose onto the spray gun, pull back the collar on the spray gun and push the hose into the coupler on the spray gun.

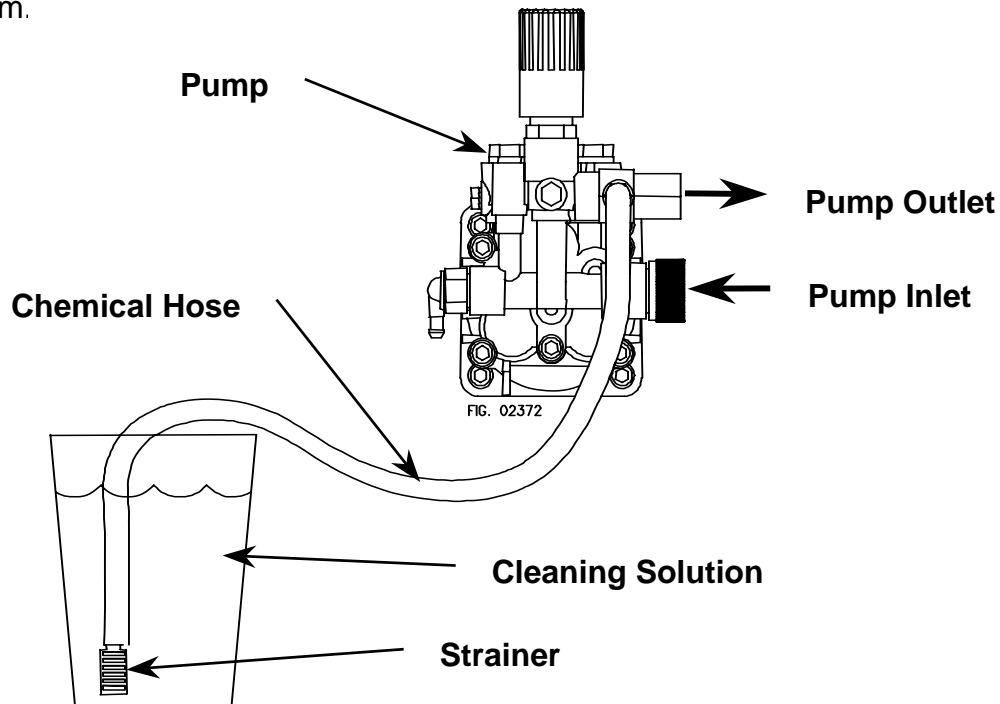


Once the connections are made, pull on the hose to make sure it is secure.

⚠ Operation Instructions

Applying Chemicals

- 1.) Install the black nozzle to spray chemicals onto the cleaning surface.
- 2.) Start the pressure washer according to the start-up instructions.
- 3.) Submerge the chemical hose in cleaning solution. (See Pump Component Identification section for chemical injector location.)
- 4.) Squeeze the spray gun trigger. The chemical injector will draw the chemical into the water stream.
- 5.) Apply chemicals evenly onto the cleaning surface. Allow the chemicals to react with the dirt, then clean at high pressure with green nozzle.
- 6.) Never use more chemical than is necessary to clean the surface.
- 7.) To clean the chemical injector, draw water through the strainer until all the chemical is purged from the system.



⚠ WARNING

Risk of exposure to dangerous chemicals.

Serious injury or death can result if chemical manufacturer instructions are not followed.

- Wear protective gloves when handling and cleaning with chemicals.
- Understand all safety hazards and first aid for all chemicals being used.
- When cleaning filters, check if chemicals have been used and take any precautions that are recommended by the chemical manufacturer.
- Different chemicals may interact dangerously with each other, always follow chemical manufacturer directions before switching chemicals.
- Calculate the correct amount of chemical to mix, dispose of excess chemical per the manufacturer instructions.
- Never spray flammable liquids.



fig01846

▲ Maintenance and Storage

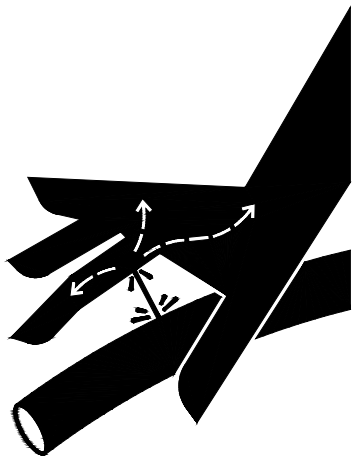
Maintenance Mode

Before performing any maintenance on the pressure washer, it must be placed in maintenance mode.

- 1.) Turn off engine.
- 2.) Turn off water supply.
- 3.) Squeeze trigger to relieve system pressure.
- 4.) Shut off fuel valve.
- 5.) Unplug spark plug wire from spark plug, (see engine owners' manual).

Maintenance Schedule

What to Check	When To Check	What to Do
Inlet Filter	Each Use	Visually inspect and clean inlet filter with clear water.
Pressure Hose	Each Use	Visually inspect pressure hose and hose couplings. Replace hose if any of the following is evident: hose coupling is damaged, wire mesh is exposed or damaged, hose is permanently kinked or flattened, outer hose cover is blistered or loose.
Bolts	Each Use	Tighten any loose bolts.
Engine Oil	See engine manual	See engine manual for oil change instructions
Pump Oil	After 1 st 50hrs, then 3mo/500hr	Change pump oil. See pump oil change instructions on next page.



▲ WARNING

Skin injection hazard.

High pressure fluid can inject under skin resulting in serious injury including amputation.

- Make sure all fittings are tight before applying pressure. Relieve system pressure before servicing.
- Do not check for leaks with hand. Instead, use a piece of cardboard to check for leaks.
- If skin injection happens, seek immediate "Surgical Treatment".

fig01454

▲ Maintenance and Storage

Pump Oil Change

1) Place a suitable container below the pump to catch the used oil.

- VRX:** Remove the bolts that connect the pump to the engine. Remove fill cap and rotate pump upside down.
- All other pumps:** Remove drain plug.

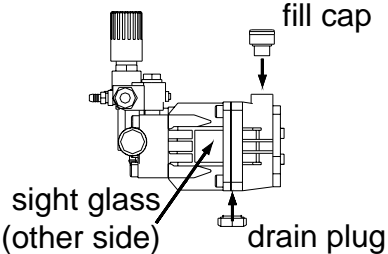
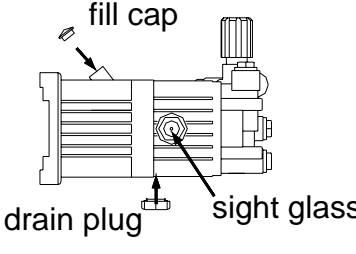
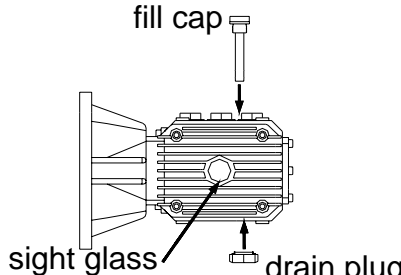
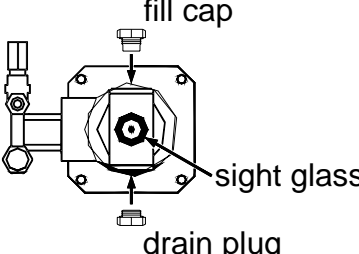
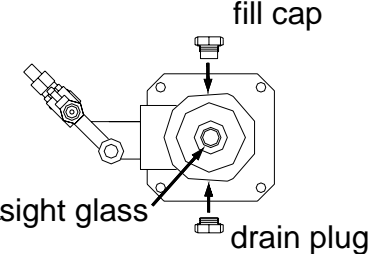
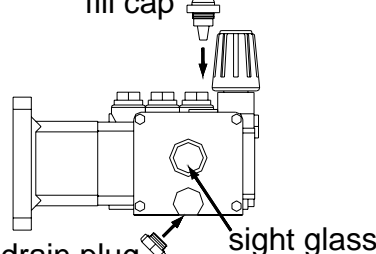
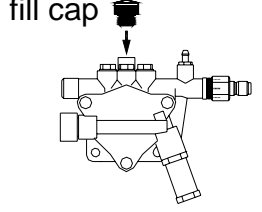
2) Allow the used oil to drain completely.

- VRX:** Rotate pump to the upright position, and reinstall mounting bolts.
- All other pumps:** Reinstall drain plug.

3) Please dispose of used oil in a manner that is compatible with the environment. We suggest you take used oil in a sealed container to your local recycling center or service station for reclamation. Do not throw it in the trash, pour it on the ground or down the drain.

4) With the pump in a level position add oil to the pump (see capacities below). For Comet pumps: Use Universal Tractor Transmission Oil (part# COCP2101) or Mobil1 15W50 synthetic oil. For Cat pumps: Use SAE 30 non-detergent oil or Cat pump oil item # 22158.

- VRX:** Add specified capacity.
- All other pumps:** Fill to middle of sight glass.

<p style="text-align: center;">Comet BXD 2530 Pump</p>  <p style="text-align: center;">Oil capacity: 4.3 oz. (.13L)</p>	<p style="text-align: center;">Comet AXD 3032 Pump</p>  <p style="text-align: center;">Oil capacity: 5.7 oz. (.17L)</p>	<p style="text-align: center;">Comet ZWD3540 Pump</p>  <p style="text-align: center;">Oil capacity: 10.3 oz. (.30L)</p>
<p style="text-align: center;">Cat 3DNX25GSI Pump</p>  <p style="text-align: center;">Oil capacity: 8.5 oz. (.25L)</p>	<p style="text-align: center;">Cat 3SPX30G1I Pump</p>  <p style="text-align: center;">Oil capacity: 10.2 oz. (.30L)</p>	<p style="text-align: center;">Cat 66DX35G1I Pump</p>  <p style="text-align: center;">Oil capacity: 18 oz. (.53L)</p>
<p style="text-align: center;">Comet VRX 2528G Pump</p>  <p style="text-align: center;">Oil capacity: 3.4 oz. (.10 L)</p>		<p style="text-align: right; font-size: small;">FIG02377</p>

▲ Maintenance and Storage

Long Term Storage

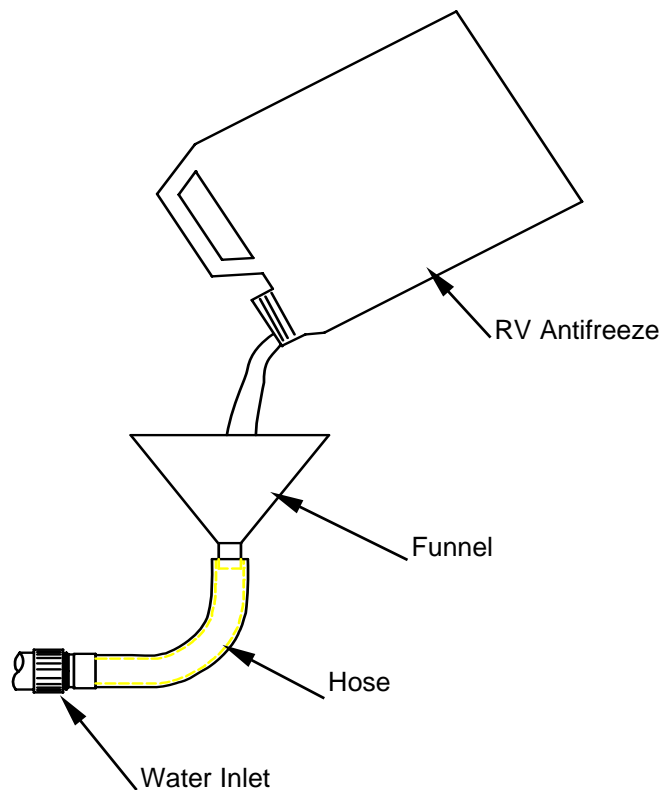
Follow the engine owner's manual for storing the engine.

Winter Storage

Protect your pump, hose, and gun from freezing.

Items needed: 12" piece of garden hose or equivalent, funnel and RV antifreeze (approximately 6 oz.)

- 1.) Follow the storage instructions listed above.
- 2.) Disconnect spark plug cable. Make sure the engine start switch is OFF and the fuel valve is OFF.
- 3.) Attach the garden hose with funnel to the pump inlet (see illustration).
- 4.) Pour RV antifreeze into the funnel, pull the engine recoil until antifreeze comes out the pump outlet.
- 5.) Drain all water from the high pressure hose. Depress trigger on gun and drain all water out of gun/lance.



Troubleshooting

Problem	
Engine will not start	SOLUTION: A,B
Low/Surging pressure or no water flow	SOLUTION: C,D,E,F,G,H
No chemical injection	SOLUTION: I,J,K,L
Cause	Solution
A- Low oil shutdown	See engine manual for oil requirements
B- Engine starting instructions not followed	See engine manual for starting instructions
C- Insufficient water supply	See water supply section of this manual
D- Plugged pump inlet filter	See maintenance section of this manual
E- Wrong nozzle	Make sure high pressure nozzle is being used
F- Plugged nozzle	Remove nozzle, check for blockage
G- Worn nozzle	Replace nozzle
H- Leak in pressure hose	Replace pressure hose
I- Wrong nozzle	Make sure chemical nozzle is being used
J- Back pressure from extra long discharge hose	Try shorter hose
K- Leak in chemical siphon hose	Replace hose – use hose clamps if necessary
L- Chemical strainer not submerged	Make sure strainer is completely submerged

Any Questions, Comments, Problems or Parts Orders

Call NorthStar Product Support 1-800-270-0810

Specifications

1578112

PSI (bar)	3000 (207)
GPM (l/min)	2.5 (9.4)
Max Water Temp	140°F (60°C)
Noise Level	78 dB
Dimensions L x W x H	34" x 21" x 38" (864mm x 534mm x 965mm)
Weight	97 lb (44kg)

1578172

PSI (bar)	3000 (207)
GPM (l/min)	2.5 (9.4)
Max Water Temp	140°F (60°C)
Noise Level	78 dB
Dimensions L x W x H	34" x 21" x 38" (864mm x 534mm x 965mm)
Weight	96 lb (44kg)

1578132

PSI (bar)	3200 (220)
GPM (l/min)	3.0 (11.3)
Max Water Temp	140°F (60°C)
Noise Level	82 dB
Dimensions L x W x H	34" x 21" x 38" (864mm x 534mm x 965mm)
Weight	120 lb (55kg)

1578182

PSI (bar)	3300 (227)
GPM (l/min)	3.0 (11.3)
Max Water Temp	140°F (60°C)
Noise Level	82 dB
Dimensions L x W x H	34" x 21" x 38" (864mm x 534mm x 965mm)
Weight	123 lb (56kg)

1578152

PSI (bar)	4000 (275)
GPM (l/min)	3.5 (13.2)
Max Water Temp	140°F (60°C)
Noise Level	82 dB
Dimensions L x W x H	34" x 21" x 38" (864mm x 534mm x 965mm)
Weight	141 lb (64 kg)

1578202

PSI (bar)	4000 (275)
GPM (l/min)	3.5 (13.2)
Max Water Temp	140°F (60°C)
Noise Level	82 dB
Dimensions L x W x H	34" x 21" x 38" (864mm x 534mm x 965mm)
Weight	147 lb (67 kg)

1577543

PSI (bar)	2800 (193)
GPM (l/min)	2.5 (9.4)
Max Water Temp	140°F (60°C)
Noise Level	75 dB
Dimensions L x W x H	34" x 21" x 38" (864mm x 534mm x 965mm)
Weight	77 lbs

1577544

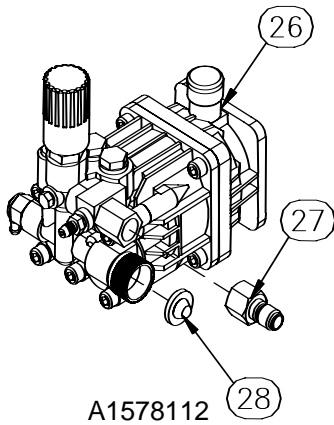
PSI (bar)	3000 (207)
GPM (l/min)	2.5 (9.4)
Max Water Temp	140°F (60°C)
Noise Level	82 dB
Dimensions L x W x H	34" x 21" x 38" (864mm x 534mm x 965mm)
Weight	83 lbs

The manufacturer reserves the right to make improvements in design and/or changes in specifications at any time without incurring any obligation to install them on units previously sold.

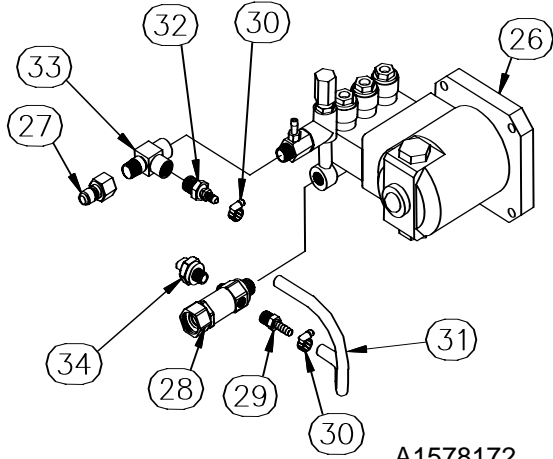
Parts Exploded View

REF#	PART#	DESCRIPTION	QTY	MODEL
1	38509	Gun Hook	2	all
2	778065	Decal	1	all
3	35198	Grommet	5	all
4	779927	Handle	1	all
5	38510	Hose hook	1	all
6	38578	Knob	2	all
7	779924	Base	1	all
8	2278	Wheel	2	all
9	305200	Wheel Retainer	2	all
10	38525	50' Pressure Hose	1	1578112, 8172, 8132, 8182, 8182, 8202
	38524	25' Pressure Hose		1577543, 7544
11	777915	Hose Quick Couple Nipple	1	all
12	777914	Hose Quick Coupler	1	all
13	313107	Spray Gun Quick Coupler	1	all
14	779168	Spray Gun Handle	1	1578112, 8172, 8132, 8182, 8182, 8202
15	22622	Lance w/ Quick Connect	1	1578112, 8172, 8132, 8182, 8182, 8202
16	779165	Spray Gun	1	1578112, 8172, 8132, 8182, 8182, 8202
	38527			1577543, 7544
17	779166	Lance	1	all
18	777904	Nozzle Quick Coupler	1	all
19	38530	Nozzle 2 Pack #3.0	1	1577543, 7544
	38531	Nozzle 5 Pack #3.0		1578112,8172
	38532	Nozzle 5 Pack #3.5		1578132,8182,8152,8202
20	2212	Chemical Strainer	1	all
21	777165	Braided Chemical Hose	3 ft	all
22	2215	Rubber Foot	2	all
25	60590	Honda GX 160 Engine	1	1578112,8172
	39115	Honda GX 270 Engine		1578132,8182
	601091	Honda GX 390 Engine		1578152,8202
	60599	Honda GC 160 Engine		1577543
	38522	Honda GC 190 Engine		1577544
26	A1578112	Pump Assembly	1	1578112 & 1577544
	A1578172	Pump Assembly	1	1578172
	A1578132	Pump Assembly	1	1578132
	A1578182	Pump Assembly	1	1578182
	A1578152	Pump Assembly	1	1578152
	A1578202	Pump Assembly	1	1578202
	A1577543	Pump Assembly	1	1577543

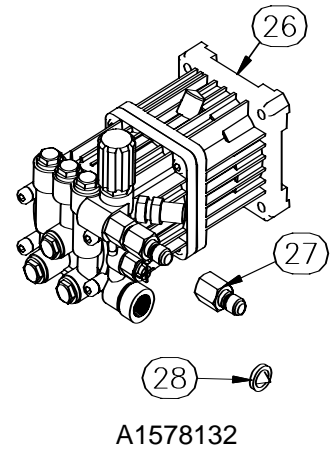
Pump Exploded View



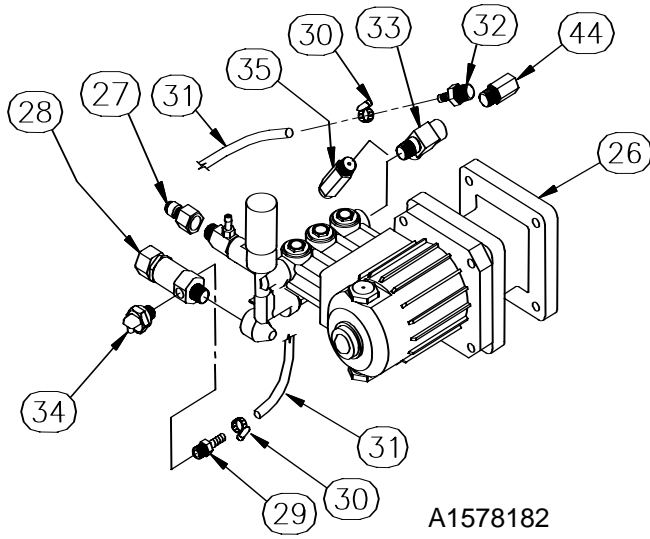
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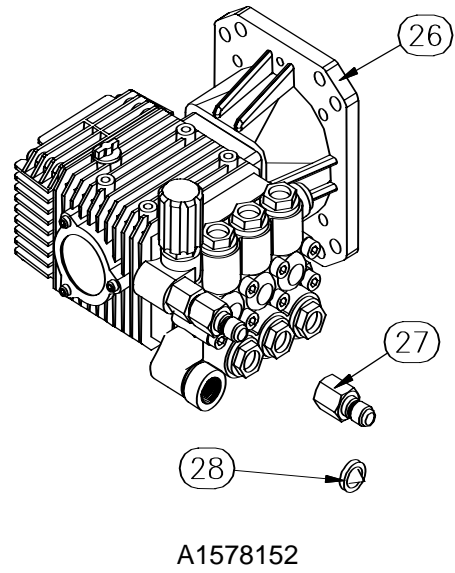
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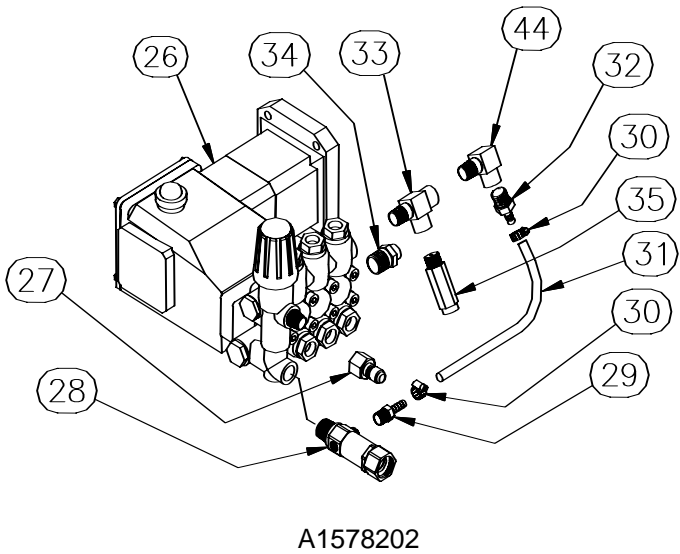
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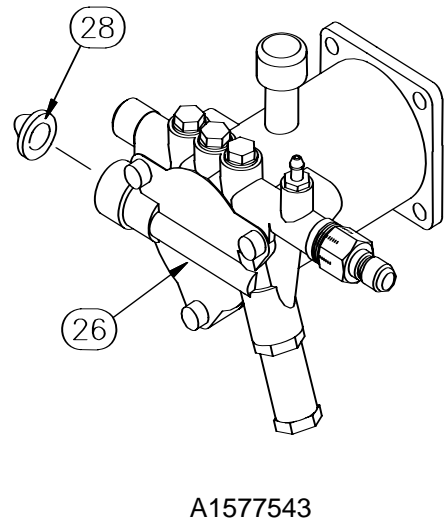
A1578182



A1578152



A1578202



A1577543

FIG02404

Pump Exploded View

REF#	PART#	DESCRIPTION	QTY	MODEL
26	779828	Comet BXD 2530G Pump	1	1578112 1577544
	38518	Cat 3DNX Pump		1578172
	779829	Comet AXD Pump		1578132
	777654	Cat 3SPX Pump		1578182
	778164	Comet ZWD Pump		1578152
	38520	Cat 66DX Pump		1578202
	779827	Comet VRX 2528G Pump		1577543
27	777915	Quick Connect Outlet Plug	1	All
28	4027	Inlet Filter Washer	1	1578112,8132, 8152, 7543
	38596	3/8" Inlet Filter		1578172,8182
	35169	1/2" Inlet Filter		1578202
29	777340	1/4" x 1/4" Hose Barb Fitting	1	1578172,8112, 8202
30	777834	1/4" Hose Clamp	2	1578172,8182, 8202
31	777165	1/4" PVC Hose	12"	1578172,8182, 8202
32	38584	Easy Start Valve	1	1578172,8182, 8202
33	777347	3/8" Street Tee	1	1578172,8182, 8202
34	35918	Thermal Valve	1	1578172,8182
	777836			1578202
35	22393	Pop Off Valve	1	1578182, 8202
44	777842	3/8 Street elbow	1	1578182, 8202

ITEM NUMBERS: 1578112, 1578172
1578132, 1578182
1578152, 1578202
1577543, 1577544

Packaged By: _____

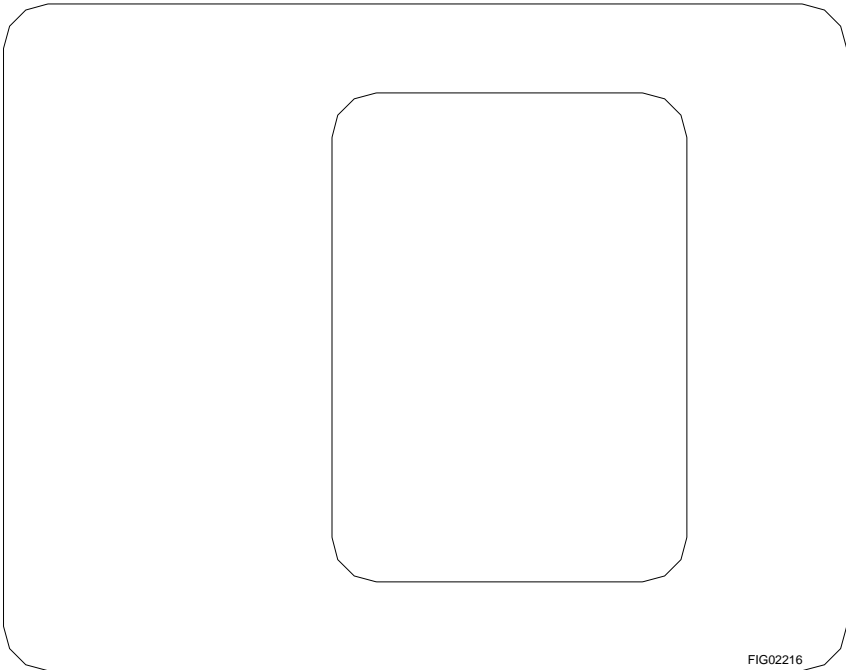
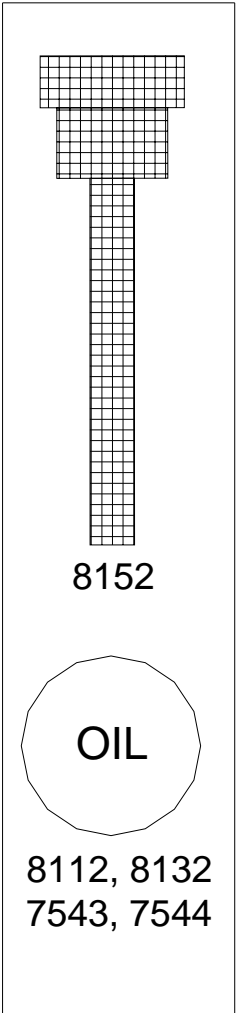
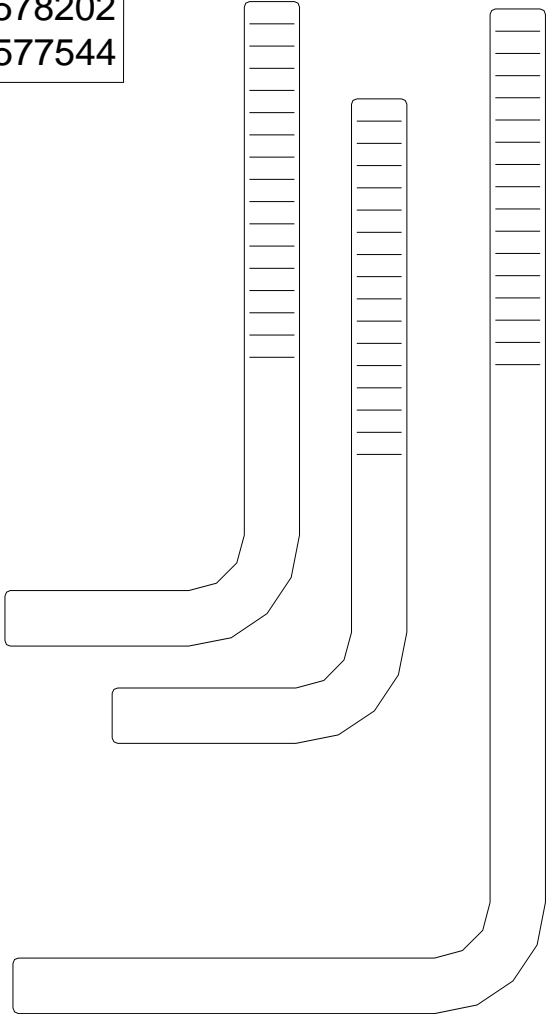
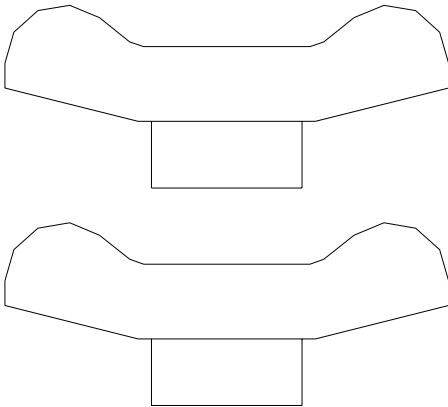
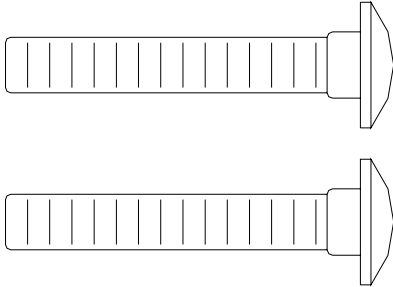
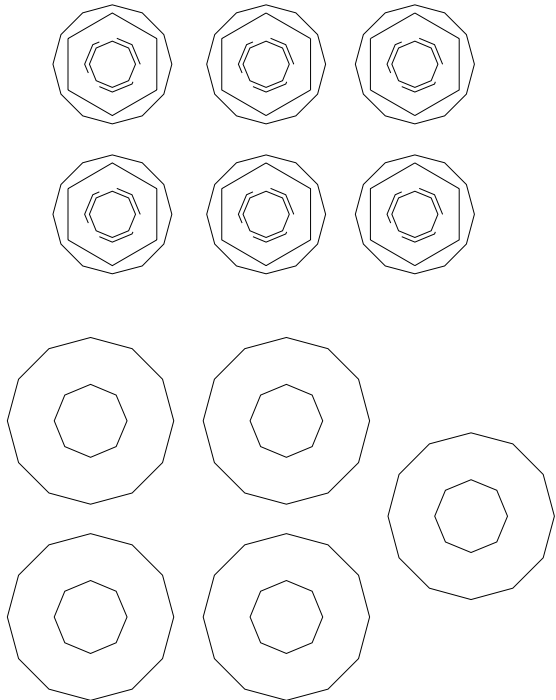


FIG02216



*This page is to help ensure that the factory includes all components in the manual bag.